Yarmouk University
Faculty of Economics & Administrative Sciences
Accounting Department

Master Thesis under the Title of:

The Relationship between Financial Distress and Earnings Management: Evidence from Jordan

العلاقة بين التعثر المالي و إدارة الأرباح: دليل من الأردن

Prepared by

Aroub Atef Hussein Al Bataineh

Supervisor

Dr. Iaad Issa Mustafa Al-Sartawi

May, 2014

__Committee Decision__

The Relationship between Financial Distress and Earnings Management: Evidence from Jordan

By

Aroub Atef Al Bataineh
B.Sc. Accounting, Yarmouk University, 2006

Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of Master in Accounting at Yarmouk University

Committee Members:

Dr. Iaad Issa Al Sartawi, Supervisor ....

Assistant Professor of Accounting, Yarmouk University.

Prof. Mishiel Said Suwaidan, Member ....

Professor of Accounting, Yarmouk University.

Dr. Ziad Mohamed Zurigat, Member ....

Associate Professor of Banking & Finance, Yarmouk University.

May, 2014

AKNOWLEDGMENTS

Many people have contributed greatly to this thesis. Without their assistance, completing this work would not have been possible. To each of them, I owe my sincere thanks and gratitude.

First and foremost, I would like to thank my supervisor, Dr. Iaad Sartawi, for his continuous support and encouragement. I would like to express my sincere gratitude and appreciation for his assistance, valuable feedback, and comments.

I am also deeply indebted to the Viva committee; Prof Mishiel Suwaidan and Dr. Ziad Zurigat for his valuable comments and recommendations that enriched my study and Dr. Suad Azzam, for her great help.

Finally, I wish to thank my dearest parents, my lovely husband and daughter, brothers, and sisters for always being there for me. Without their love and support, I would not have the strength to complete this journey.

Dedication

I dedicated this work to the following individuals:

My mother & father

For everything they have done for me, and For their early support and friendliness.

My beloved husband, Mr Osama Bataineh
Who encourages me to make my best choices.

My little sweet daughter, Jorie.
My sisters & brothers
For their great help and support.

My husband's family For their kindness.

LIST OF CONTENT

LIST OF TABLES AND FIGURES

ABSTRACT

Al Bataineh, Aroub Atef Hussein. The Relationship between Financial Distress and Earnings Management: Evidence from Jordan. Master of Accounting, Yarmouk University, 2014.
Supervisor: *Dr. Iaad Issa Mustafa Sartawi.*

This study aims to empirically examine earnings management practices for financially distressed industrial firms listed on the Amman Stock Exchange between 2006-2010. The modified Jones model is used to calculate discretionary accruals. Altman z-score model is used to determine financially distresses firms. Using pooled OLS multiple regression on a sample of 51 firms the study revealed that 62% of the industrial firms engage in earnings management practices. Also, the evidence shows a statistically positive relationship between financial distress and earnings management practices. In addition, a highly significant positive relationship is found between financial leverage and earnings management. On the other hand, the results show a negative relationship between the growth opportunity and earnings management practices. Similarly, board independence and ownership concentration are negatively related to earnings management practices. The study recommend Policy makers to think of new means and methods to protect the rights of stakeholders in obtaining reliable financial statements information about their interest

Key words: Earnings management, financial distress, publicly listed firms, ASE

ملخص الدراسة

البطاينه، عروب عاطف حسين. العلاقة بين التعثر المالي و إدارة الأرباح: دليل من الأردن، رسالة ماجستير في المحاسبة، جامعة اليرموك، 2013.
إشراف: د. اياد عيسى مصطفى السرطاوي.

هدفت هذه الدراسة إلى فحص ممارسات إدارة الارباح للشركات المتعثرة ماليا و في الشركات الصناعية الأردنية المدرجة في سوق عمان المالي بين الفترة 2006-2010. تم استخدام نموذج جونز المعدل لاحتساب المستحقات الاختيارية. كما تم استخدام نموذج ألتمان لتحديد الشركات المتعثرة ماليا. وقد اظهرت نتائج تطبيق نموذج الانحدار المتعدد على عينة مكونة من 51 شركة أن 62% من الشركات الصناعيةُ تقوم بممارسة إدارة الأرباح. وكشفت الدراسة أيضاً عن وجود علاقة إيجابية ذات دلالة إحصائية بين التعثر المالي وإدارة الأرباح. بالإضافة إلى ذلك فقد تبين وجود علاقة إيجابية بين حجم المديونية وممارسة إدارة الأرباح. ومن جهة أخرى توصلت الدراسة إلى وجود علاقة عكسية بين فرص النمو في الشركات و ممارسات إدارة الأرباح. كما أن كل من استقلالية مجلس الإدارة و نسبة تركيز الملكية في المجلس ترتبط بعلاقة عكسية ذات دلالة إحصائية مع إدارة الأرباح.توصي الدراسة بضرورة إيجاد طرق جديدة من قبل صناع القرار لحماية حقوق مستخدمي القوائم المالية لضمان حصولهم على معلومات ذات مصداقية عالية يمكن الاعتماد عليها .

كلمات مفتاحية: إدارة الأرباح، التعثر المالي، الشركات المدرجة، بورصة عمان.

CHAPTER ONE:

INTRODUCTION

1.1 Introduction

Firms around the world may, sometimes, face financial difficulties that lead some of them to be delisted, or even in more severe cases, to announce their bankruptcy. Some firms do restructuring and change their board of director, recruit new staff, solve debt problems, or lower their capital to get out of difficulties. Other firms do not succeed in solving the problem. Firm in both developed and developing economies are subject to financial distress. For instance during 2013, the Minister of Industry and Trade in Jordan announced that (72) Jordanian firms are to be sent to the general attorney and anti-corruption committee, for violating the Companies Law and potentially practising earnings management. Only (10) firms had been discovered by auditors' reports (ALrai 2013). Therefore, there is a need to detect such cases before they are publicly announced; as investors rely most on financial statement to make decision; its critical to protect investors from being mislead (Al-Fayoumi *et al.*, 2010). Auditors and regulators should have empirically tested methods to examine whether firms adhere to laws and regulation or not to protect the stakeholder from being deceived by misleading information.

As a result, investors tend to become more alert to investing their funds in the Jordanian stock market; In the first quarter of 2014, the amount of shares traded on the Jordanian financial market was only JD 777 million,

representing 4% of the total firms market value which is a very low percentage (ASE, 2014)

Auditing of financial statements is used to protect stakeholders from misleading information. Earnings management practices are usually considered as a negative factor affecting the quality of financial statements. A large body of previous research focused on incentives of earnings management during periods of financial difficulties. Researchers found that distressed firms use earnings management to increase profit figure. Hayn, (1995) found that during periods of financial difficulties many firms report positive profit which is just above zero. Another incentive to apply earnings management techniques is the global financial crises (GFC). Bartram and Bodnar (2009) stated that during GFC, firms face tough conditions such as higher cost of financing; this condition may provide an incentive to managers to deliberately increase the profit as a step to escape from being distressed or losing creditors or any valuable investment opportunity.

1.2 Earning Management in Jordan

In 1978 Amman financial market was established. In 1997, the security law was introduced to transform the original financial market into three institutions:

- Jordanian security commission JSC
- Amman stock Exchange ASE
- Security depository centre SDC

Amman stock exchange is the largest market that authorizes the non-Jordanian investment, during recent privatization series the government ownership share in the economy recede.

One of the early studies regarding earnings management practices in Jordanian firms listed on ASE is the study conducted by Al Momani, (2006) who examined the flexibility level available in Accounting Standards (discretionary accrual) in the annual reports of 70 firms over the period 1997-2003. He found that the majority manager engage in earnings management by exploiting that flexibility under Accounting standards. Hereafter, (Al Khabash and Al Thuneibat, 2009) provided further evidence regarding Jordanian companies practising earnings management but from external and internal auditor perspective they both indicate by a questioner

an existence of earning management in Jordanian companies but with different direction (income increase/decrease) another Jordanian study by (Al-Fayoumi *et al* 2010) aimed to examine the relationship between earning management and ownership structure over 2001-2005 the study result stat that Jordanian insiders tend to make discretionary accounting choices, (Mashoka 2010) provide further evidence about Earning management within Jordanian firms is regards as attempt to avoid dropping back to the second market, such event will harm the reputation of the managers as well as companies. (Ramadan 2012) found that external financing is more sensitive to aggressive earnings management in ASE service and industrial the external financing become higher at the periods subsequent to aggressive earnings management, All previous studies have proved the existence of earnings management practices in Jordanian listed firms , but there is no evidence Enough for financial distress in the context of the practice of earnings management.

The purpose of this study is to test whether or not Jordanian firms faces financial difficulties do practice earnings management.

1.3 Problem Statement

Financial distress in firms has long been an issue of concern to governments, investors and stakeholders. A significant deterioration in firm's financial performance may eventually result in insolvency, making

investors and creditors lose their valuable investment. Financial distress is costly because it creates a tendency for firms to do things that are harmful to stakeholders, and raising the costs of financing, If firm faces financial difficulties, the managers can expect to have their bonuses cut, be replaced and suffer loss of reputation (Liberty and Zimmerman 1986; Gilson 1989).

In light of the above discussion, the problem of the current study can be summarized by the necessary need to uncover the magnitude of using earnings management practices for financially distressed firms listed in Amman stock exchange or Do financial difficulties lead Jordanian companies to practise earnings management?.

1.4 Importance of the Study

The current study is supposed to give one more Jordanian contribution toward the earnings management phenomenon; its aim is to detect the earnings management practices on Jordanian firm that face financial difficulties. To the best of the researcher's knowledge, the current study will be the first study that test for the effect of financial distress on earnings management behavior in Jordan, which is considered a developing economy context. Also, from a practical point of view, understanding the consequences of applying earnings management practices in Jordanian firms could be very important to stakeholders of firms, especially for

investors, as it gives more reassurances and certainty while making decisions about financial statements. The findings that are expected to be obtained from the current study could be of great interest to regulators, standard; setter authoritative organizations in the area of formulate appropriate policies to limit earnings management practices.

1.5 Objective of the Study

The aim of the study is to provide empirical evidence of using earnings management practices in financially-distressed firms listed on the (ASE).

1.6 Hypotheses of the Study

H_1: There is a significant positive relationship between financial distress and earnings management practices in Industrial Jordanian firms listed on ASE.

H2: There is a significant negative relationship between board of director's independence and earnings management practices in Jordanian firms listed on ASE.

H3: There is a significant positive relationship between board of director's ownership concentration and earnings management practices in Jordanian firms listed on ASE.

H4: There is a significant negative relationship between non Jordanian investment and earnings management practices in Jordanian firms listed on ASE.

H5: There is a significant positive relationship between the size of board of directors and earnings management practices in Jordanian firms listed on ASE.

H6: There is a significant negative relationship between the firm's size and earnings management practices in Jordanian firms listed on ASE.

H7: There is a significant positive relationship between the firm's financial leverage and earnings management practices in Jordanian firms listed on ASE.

H8: There is a significant negative relationship between audit quality and earnings management practices in Jordanian firms listed on ASE.

H9: There is a significant negative relationship between the firm's growth and earnings management practices in Jordanian firms listed on ASE.

1.7 Limitation of the Study

1- The findings of this study are applicable only to the industrial sector from 2006 until 2010 and cannot be generalized to other sector or period; the sample is chosen from the listed Jordanian firm.

2- The context of the study is Jordan as a developing economy; the results of the study can only be compared with similar contexts.

1.8 Structure of the Study

Chapter One: introduction

Contain problem statement and importance, objective, Hypotheses and limitation of the study.

Chapter Two: theoretical background.

Contain definitions, conditions, Technique and motivation of earning management, operational and real earning management, academic and non academic perspective toward earning management

Chapter Three: literature review and hypotheses development.

Contain many relevant studies in the area of financial distress and earning management, distinguishing features of current study and Hypotheses Development.

Chapter Four: research methodology.

Contain study population and sample, data sources, variables and model and calculation method for each variable and disclose the regression model

Chapter Five: analysis of the result.

Present the result of regression, after testing regression assumption and disclose descriptive analysis, and testing hypotheses testing.

Chapter Six: conclusion and recommendations.

Present summary of research result and conclusions

CHAPTER TWO:

THEORETICAL BACKGROUND

2.1 Introduction

The objective of this study is to empirically examine earnings management behaviour of financially distressed firms in Jordan. This chapter presents a theoretical background about the concept of financial distress and earnings management its structure as follows.

2.2 Financial Distress

One of the fundamental assumption in accounting is going concern the financial statement are prepared assuming that a business entity will continue to operate in the future. Therefore, it is assumed that the entity will realize its assets and settle its obligation in the normal courses of business. When companies fail to pay its obligation it is conceder distressed (*Accounting-simplified.com*) what is financial distress? "A condition where a company cannot meet or has difficulty paying off its financial obligation to its creditors" *(investopedia)* Companies that faces financial distress suffering from increasing the cost of financing "higher risk higher return" losing valuable investment opportunity and less productivity, when firms financially distressed there are three method to correct the financial deterioration (Senbet and Seward 1995): Financial restructuring, Asset sales and Infusions of new capital from outside sources.

2.3 Earnings Management

Davidson *et al*, 1987 (cited in Schipper (1989): 92), define earnings management as *"the process of taking deliberate steps within the constraint of generally accepted accounting principle to bring about a desired level of reported earnings*". Davidson *et al* describe earnings management practices as normal behaviour occurring within the boundaries of GAAP. Accounting Choices, it means that the practices of earnings management are done under discretion of management.

Schipper (*1989: 92*) defines managing earning as a "*purposeful intervention in the external financial reporting process with the intent of obtaining some private gain*". He focuses on managing earnings that encompasses real earnings management, which affects the minds of investors about the firm to provide favourable impression about the performance and the financial position of the firm. This almost happens at the timing of initial public offering season, merger and acquisition and any external use of financial statements.

Healy and Whalen, (1999: 368) argue that "*earnings management occurs when manager use judgments in financial reporting and in structuring transaction to alter financial reports to either mislead some stakeholder*

about underlying economic performance of the firm or influence contractual outcome that depends on reported accounting numbers". The word (mislead) in the definition indicates that earnings management makes what is called signalling reporting rather than hiding performance deterioration. This selective signalling attempts to deceive the second party of contractual agreements by the management, a practice that is close enough to fraud.

All previous definitions focus on manipulation of earnings in different ways such as "delaying the expenditure, accelerates the revenue.... etc." As we know, any phenomenon measure or (proxy) is derived directly from the definition of such phenomenon. However, from the researcher's point of view, the concept of earnings management can be defined as: any act committed by an internal or external party to change the numbers reported on the financial statements or any other documents which works in favour of any beneficiary leading to inappropriate moving of earnings upward or downward.

Earnings management definitions are sharing much more fraud (Beneish, 2001) regardless the way or the changes be them numerically or not; when earnings are managed, the financial statement will contain misleading

numbers that distort the value of earnings. All models that were developed are just proxies that give an indication or sign "not more" about any unethical acts. It may be too early to state this on this part of the study but only qualified independent audit teams that are legally related to a governmental body can be the highly trustable party to do audit jobs to uncover any deviation from the straight line. Sometimes, public firms do make financial statement auditing using the services of established auditing firms and they do apply corporate governance in organizational management. However, it is unfortunate that some firms still deliberately manipulate their numbers.

2.4 Conditions for Earnings Management

There are two fundamental conditions for the existence of earnings management introduced by (Sun and Rath ,2008). These are: information asymmetry and agency conflict. As we study earnings management, it is necessary to explain the agency cost relationship with earnings management and information asymmetry.

2.4.1 Information asymmetry

Information asymmetry can be described by two features. *First* the extent to which manager know more about the firm than investors as a group?,

Second to what extent the amount of information regarding the firm varies from one group of investors to another (Watts and Zimmerman,1986), In general, the level of information asymmetry is higher before financial statements are issued . (Kim and Verrechina ,1994) argue that the incentive for private information search and the level of information asymmetry among investors is expected to be particularly high prior to informative, scheduled *announcement, which means that financial statements and* auditing efforts are found to reduce the risk of uncertainty regarding financial statements. In order to accomplish this job, it has to be characterized by values such as integrity, clearness, transparency, and genuine. From this point, the linkage between earnings management and information asymmetry exists; here the financial statement distinguishing Hall Mark is to be actual reflecting the reality of performance, and earnings management in some way distorts this fact which means that earnings management increases the amount of uncertainty regarding the creditability of financial statements and the firm as a whole leading to information asymmetry problems. Once it is publicly discovered, the trustworthiness of firms diminishes, stakeholders get unfavourable image; such image may result in reducing the stock price, losing valuable investment contract, and creating un-trustable debt environment. According to the definition of information asymmetry, the gap of knowledge among the investors

themselves or between investors and management are not diminished by the availability of information through financial statement issuance, because under earnings management practices the investors have information not consistent with the real performance.

2.4.2 Agency conflict

Jensen and Meckling (1976) define that agency relationship as a contract under which one party (the principle) engage another party (the agent) to perform some service on their behalf and what its required to delegate some decision-making authority to the agent. The agency problem lies in how to convince the agent to perform the required mission as its need to be done, the (agent) or (manager) starting to pursue their own self wealth maximization regardless of the consequences associated with those decisions. This selective behaviour leads to many problems including distorting the firm's reputation and affecting the stock prices in the market, as well as other problems arising from increasing the cost of financing whether shares or debt financing.

Earnings management is one way that stimulates managers to pursue their self-welfare by deliberately manipulating earning numbers to get a bonus, hit the target, and earn rewards. When the agency conflict arises, earnings

management is a way to change the financial statement numbers in favour of the management. Stockholder regularly meet the management to review the result of the year when managers face unexpected severe under-performance which results in deteriorating financial positions and sometimes in deviation from the contractual agreements. Such cases make an incentive for managers to manipulate earnings and maintain their bonus away from being cut down (Balsam, 1998).

This study is not concerned to put rules about cause and effect relationship between earnings management and information asymmetry but there is a necessity need to discuss information asymmetry concept because it tends to be one symptoms of earnings management.

2.5 Asymmetric Information &Agency Conflict in Jordanian Market

The Efficient Market Hypotheses state that market is efficient and the investor is confident when current market price fully reflects all available information about a security and the expected return is consistent with associated risk (Fama, 1970). In the Jordanian financial market the price is highly violated because of small and thin market and lack of liquidity. Hence, low transparency in information between buyers and sellers leading to uncertainty risk regarding a security (Zurigat and Gharaibeh 2011). This

problem makes it difficult and costly to raise money through capital market. The high rate of return required by investors and the Lack of developed bonds market, force firm in Jordan to depend on internal financing (Booth, 2001). Furthermore, the more conservative debt policy adopted by Jordanian banks makes the cost of financing very high. All these reasons may motivate Jordanian firms to deliberate earnings and profit figure up wards to communicate a good looking performance and attract more investors in subsequent periods (Mashoka, 2010) .

2.6 Earnings management techniques

Generally, earnings management techniques fall into two broad categories (Mulford and Comiskey 2002):

1. *Earnings management within the boundaries of GAAP*
2. *Abusive earnings management*

2.6.1 Earnings management within the boundaries of GAAP

Table 1, presents 20 techniques used in practicing earnings management that fall within GAAP flexibility. For example, the first 3 techniques indicate any reversal that may be made to edit the useful life or depreciable asset amount. These changes are acceptable under GAAP. Mangers may estimate assets' useful life and these estimations are not 100% accurate.

Finally, it's just a future prediction that may be revised leading to under-estimating the expenses hence pushing the income numbers upward.

The techniques from 4 to 7 focus on management judgment and experience regarding allowances. These allowances are made to multiple reasons; for example, doubtful accounts write off these accounts in huge amounts leading to decreasing the income numbers in this year to boost up the number in later years to show growth in profit compared to previous years; this act is called (big bath), Techniques 7 to 9 have to do with revenue recognition with its wide area accelerating revenue when dealing with constructing projects. For example, managers recognize revenue on an early stage of the project regardless of the time it accrued leading to overstating the number of income in early year which is not real or reflective of actual financial performance.

Finally, the activities at the end of table relate to the needs for an estimation to manage accruals; such estimation needs for contingent liabilities such as pensions or post-retirement benefits. In summary, accrual-based accounting systems require judgments by managers regarding the financial statements. These judgments provide a chance for management to deliberately manipulating key figures to mislead readers of financial statements in order to achieve personal gain

TABLE 1: Earnings management techniques or activities

1. Changing depreciation methods, (e.g., accelerated to straight-line)
2. Changing the useful lives used for depreciation purposes
3. Changing estimates of salvage value used for depreciation purposes
4. Determining the allowance required for uncollectible accounts or loans receivable
5. Determining the allowance required for warranty obligations
6. Deciding on the valuation allowance required for deferred tax assets
7. Determining the presence of impaired assets and any necessary loss accrual
8. Estimating the stage of completion of percentage-of-completion contracts
9. Estimating the likelihood of realization of contract claims
10. Estimating write-downs required for certain investments
11. Estimating the amount of a restructuring accrual
12. Judging the need for and the amount of inventory write-downs
13. Estimating environmental obligation accruals
14. Making or changing pension actuarial assumptions
15. Determining the portion of the price of a purchase transaction to be assigned to acquired in-process research and development
16. Determining or changing the amortization periods for intangibles
17. Deciding the extent to which various costs such as landfill development, direct response advertising, and software development should be capitalized
18. Deciding on the proper hedge-classification of a financial derivative
19. Determining whether an investment permits the exercise of significant influence investee firm
20. Deciding whether a decline in the market value of an investment is other than temporary

Source: Mulford and Comiskey 2002

2.6.2. **Abusive earnings management**

Accounting irregularities and fraudulent financial reporting are two concepts used interchangeably to describe criminal acts of management regarding financial statements fiction revenue, record revenue for subsequent period, or even worse to claim none-existing sales or record sales without shipments. Such acts increase income numbers to deceive users for non-existing sales. Also, there may be under-statement of expenses such as special purpose entity (Coallier, 2002) that occurred when a firm finds another non-existing entity to hide huge amounts of liabilities.

2.7 Earnings management motivations

2.7.1 Capital market motivation

Firms that have never entered the securities market will lack an established market price. In order to best communicate a firm's earnings power to investors, the firm will likely use prospectuses. If an investor sees a favourable reported net income in the prospectuses, he/she is likely to bid up the initial market value of the firm (Friedlan, 1994). The market motivations are not limited to newly-issued firms but also to studies results revealed that already established firms with outstanding stocks just before initial public offering season tend to managed earnings (Teoh *et al*, 1998)

show some evidence of a reversal of unexpected accruals following initial public offering as some kind of (income increasing accruals) mangers exercise earnings management in an attempt to increase stock market valuation, stock based wealth, and compensation. Another market motivation to manage earning is exercised at (pre & post) merger contracts announcements between acquirers and the target firms. (Alshariairi, 2012) shows that both acquirers and acquiree report existence of earnings management for the last four quarters prior to the deal announcement.

2.7.2 Contracting motivation

Meeting targets of a good year and achieving stable and predictable results is one of the motivations for practicing earnings management. For example, *some managers may want to maintain predetermined levels of inventory* through flexible accruals rules; managers may shift from FIFO to LIFO or alter depreciation methods to meet contracting condition. Another kind of contact is debt contract (lending contract); some lending associations or individuals impose many collateral for granted loans such as debt covenant, dividend covenants and other restrictions such as maintaining specific ROA or leverage ratio failing to have the same predetermined ratio that is required under debt contract may create incentives to manage earnings as a step to avoid agency cost of debt (Chung *et al.* 2002). For example,

Sweeny (1994) observed that a sample of firms defying covenant obligations actually took measures to implement income-increasing accounting changes, in comparison to those sample firms that did not violate contractual terms. Moreover, these firms tended to prematurely switch to new accounting policies, as they felt an obligation to inflate reported net income and error on the side of the lenders' best interest and *another problems with bond holder including contract violation penalty* which is relatively costly. Appling earnings management, however, is a less costly method to avoid any investigation and get rewarded. Some managers, for example, may not violate credit terms; instead they manage firm earnings for higher debt rating resulted from improved quality of debt lenders' first impressions about firms that had growing sales and more asset less liabilities and no time series of operational loss are safe areas for debt investment, elsewhere, they required additional interest for bearing such risks (risk premium) hence increasing the cost of financing.

2.7.3 **Changes of CEO**

CEOs engage in behaviours that maximize their own utility. CEO of a poorly performing firm will use earnings management to avoid being fired; another will use it to maximize his/her income; and a new CEO will manage earnings so as to increase his/her future income potential. (Murphy

and Zimmerman, 1993) reinforced that a "new CEO entering a poorly performing firm will tend to manage earnings in such a way that it reduces current income (ex. huge amount of allowances write off), but more importantly, will boost the firm's performance in subsequent years". This behaviour is known as taking a big bath. Thus, affluent future performance will reflect positively on a new CEO.

Newly hired manager try to exercise earnings management in order to be judged upon the first accomplishments. (De Fond and Park, 1997) found that a "manager will be judged by current firm performance, and thus will try to "smooth" reported income". Income smoothing involves using discretionary accruals to "borrow" earnings from prosperous future periods, and "save" on earnings for lean future periods the managers use earnings management as cheapest way to secure their earnings on the future (Beattie *et al*, 1994). Managing a current firm's performance augments the likelihood of job security.

2.7.4 Political and tax motivation

To the extent that firms are politically visible, that is, they are often in the public eye or subject to governmental security. This is obviously seen on publicly listed firms which is subject to restrict laws to compulsory

published financial statements. Since they are published, they are easily available for financial analysts. If a firm has a negative working capital or negative net income or both for about a couple of years, there is usually a risk to be delisted or get restructured. This is considered a situation where earnings are managed upward for political motives. Another motive is to manage earnings downward to tax shelter the positive relationship between income and income tax. To get a chance to manage earnings downward to reduce cutting taxes amounts, tax shelter motives can be seen from a wider scope than the political motive; it exists for both publicly held or partner or even sole proprietorship form of ownership. (Cahan, 1992) argue that firms use some earnings measurement method that reduce amount of net income. Another incentive to managing downward earnings is labour barging costs when firms tend to sign new contracts with employees. It reduces the income number in order to provide lower salaries and wages by contacts, and then it tends to boost the number again. (Liberty and Zimmerman, 1986) state that "expense accrual would be higher for period immediately presiding union wage bargaining" for favoured of management the income managed in two directions to achieve different means.

Finally, Table 2 summarizes the direction and the motives of earnings management.

TABLE 2: Direction and motives of earnings management

Income increasing earnings management	Income decreasing earnings management
Debt covenants	Tax shield
Compensation agreement	Big bath
Equity offering	Labour bargaining
Insider trading	

2.8 Accounting based vs. operation based (real) earnings management

The important differences between accounting and operational earnings management is the timing of earnings management (Dechow and skinner 2000). Any operational manipulation had to occur during the course of the year's normal operation. Its main causes can be related to when managers anticipate that earnings will fail to meet targets unless they take actions that deviate from the normal practice. On the other hand, accounting based earnings management, when mangers want to achieve certain earnings target, he/she waits until the year ends to use discretionary accruals to manage Earnings.

This strategy of operational earnings management comes from the risk that the amount of earnings that need to be manipulated is greater than the available discretionary accruals because the accrual discretion is bounded

by GAAP. As stated by Barton and Simko (2002), from such constraint facing the management the manager may use both types of earnings management. The manager may fail to reach targets by waiting until the end of the year to use accounting earnings management and use both operational and accounting earnings management.

Another feature of operational earnings management that auditors and regulators are less likely to be concerned with such behaviour once it's not required additional disclosures it is harder for an outsider to observe or to be detected (Schipper, 1989; Healy and Palepu, 1990). As the opposite of accounting earnings management, it's easy to detect by review (footnote) or managerial disclosure decisions. However, operation or (real) earnings management is costly including the possibility that cash flows in future periods may be negatively affected by actions taken currently to increase earnings.

2.9 Academic vs. non-academic perspectives regarding earnings management

Earnings management is a practice committed by mangers when they need to achieve short-term goals that is, not necessarily in favour of the corporate interest, but rather for the manger's personal benefit which (some time) conflict with stockholders' wealth such as overinvestment in short

term project in order to maximize bonus, salary, and promotion. According to (Mulford and Comiskey, 2002), when earnings management cross the boundaries of the flexibility of GAAP they become a type of fraud.

The perspective of academic has differed from non-academic (professionals) or regulators with regards to earnings management. Below identification of each group's uses of financial statements then present the differences between the two groups.

2.9.1 Academic users

Academia people tend to make general statements about earnings management; they examine large samples of firms and tend to use statistical definitions of earnings management that maybe not very powerful in identifying earnings management. They collect data and analyze it and simply make conclusions that are based on proxies to measure earnings management. They simply do not enter into the dynamic world of operation and how its run and take place. In other word, their role is just to give an opinion regarding the existence of Earnings Management.

2.8.2 Non-academic (regulatory) users

Practitioners (regulatory) observe actual cases of earnings management on a regular basis because their objectives are different from those of academic researchers. Sales and income taxes agents, for example, audit the financial records to test its transparency; he /she is often motivated by

the need to collect any piece of data to test whether a firm changes any accounts in order to avoid paying too much fees and mislead other by increasing the income number to meet these needs.

The academic focus on a "particular sample" and management incentives (Dechow and Skinner, 2000) is not of a great interest to practitioners and is not considered fruitful in terms of identifying earnings management behaviours.

CHAPTER THREE:

LITERATURE REVIEW

3.1 Introduction

Financial distress one of earnings management incentives to manipulate earning figures. In the following section a review of studies that focused on earnings management and financial distress is presented.

3.2 Literature Review

Jaggi *et al.* (2006) **"Financial Distress and Earnings Management: Effectiveness of Independent Audit Committees"**

The study examined whether or not monitoring of earnings management by independent audit committee differs for financially distressed and non-distressed firms. The study is applied on (234) US financially distressed firms and (990) non-distressed firms. The study used the modified Jones model with ROA (Kothari 2005), and Altman's Z-score (1968) to detect earnings management and financial distress respectively.

The results of the study showed that the monitoring effectiveness of independent audit committee of earnings management is stronger for financially distressed firms compared to financially non- distressed firms. Furthermore, independent audit committees are more concerned with positive discretionary accruals used by financially distressed firms to adjust the reported income upward.

Li *et al.* (2006) **"Earnings Management and Delisting Risk of IPO Firms".** The study investigated whether firms associated with aggressive earnings management in the IPO process are more likely to be involuntary delisted from the stock exchanges or not the sample consisted of (5698) IPO firms with available information to calculate discretionary current accruals. Earnings management is measured based on Jones (2001) model, the empirical result strongly supports the significant predictive power of earnings management on IPO failure by showing that DCA *in the IPO firm* are significantly and positively related to the probability of voluntary delisted offer IPO, This means that DCA as a proxy of earnings management are increasing as the same pattern with the timing of IPO. In addition, firms associated with aggressive earnings management in the IPO process tend to be delisted for performance failure.

leach (2007) "**Do Firm Manage their Earnings Prior to Filing for Bankruptcy**? The *study aims at investigating* whether *firms* that files for bankruptcy practise Earning Management? To achieve the study object the sample of study contain US bankruptcy traded firm from 1978-2004, discretionary accruals are calculated using method developed by Teoh, Welch, and Wong (1998), The results showed that firms five year prior to file for bankruptcy try to manipulate Earning in order to make Financial

Statement more favourable. Whereas, the non-fraudulent firms that going into bankruptcy did not change deliberately the Earning number.

Sun *et al.* (2008) **"Financial Distress and Earnings Management Effectiveness of Independent Audit Committees: Pre and Post-Sox Evidence.** The study aimed to test the monitoring effectiveness of earnings management by fully and partially independent audit committee for financially distressed firms. The sample was taken from (2001) as pre SOX year and (2003) as post SOX year excluding (2002) because the SOX was passed during this year. The final sample selected consisted of (1410) firms year observation. Firms were classified as financially distressed based on the Altman Z-score (1968) model. Earnings management is calculated by modified Jones (1991) model, the results showed that the independent audit committee monitor earnings management upward adjustment of financially distressed firms more strictly than for non-distressed firms. Fully independent audit committees are more effective in constructing earnings management than partially independent audit committees. Furthermore, the improvement in audit committee's independence in the post-SOX period is *found to be associated with lower positive discretionary accruals compared* to the pre-SOX period especially for financially distressed firms.

Hasiao *et al.* (2010) **"Earning Management, Corporate Governance, and Auditor's Opinions: a Financial Distress Predicting Model"** The study aims to test if the distressed firms are more likely to manipulate Earning, and to what extent can the board of director described as independent, also to examine auditor's ability to early forecast income manipulation within the distressed firms

The sample of the study include both listed and de-listed Taiwan firms from 1997-2005, Appling modified Jones with ROA (Kothari *et al* 2005) for Earning Management calculation and Ohlson (1980) for distressed (non-distressed rating), he study find out that both (non independent) shareholder member of board of director and auditor are best detector of any early management deliberation practices , Also the percentage of accuracy for regular and distressed firm is Approximately the same for (2006) two year before it's become distressed.

Veldhoven (2010) **"Do Companies in Financial Distress Use Earning Management?"**The study investigates the use of Earning Management in companies that file for bankruptcy after one year from receiving unqualified report. To answer the study question the selected sample of (27) firms from both public and private sector that's file for bankruptcy are

gathered from 2004-2009 the researcher used (Zmijewskis, 1984) to calculate the distress and modified Jones model (dechow) for Earning Management calculation.

The result showed that the companies that file for bankruptcy do manage their Earning and they get un qualified report one year prior to file for bankruptcy, this indicate that the Auditor fail to uncover material misstatement and fraud in financial statement.

Chelchele *et al.* (2012) **"Investigating the Relationship between the Probability of Bankruptcy and Firms Intentional Income Smoothing in Tehran Stock Exchange"**

The study aimed at examines the relationship between intentional income smoothing components and bankruptcy. To achieve the study objective (81) distressed firm for the period (1999-2008) are selected from Tehran stock Exchange, to predict the probability of bankruptcy (zavgren model) are used, and for the purpose of calculate the real Earning smoothing absolute value of real income mean - deviation from the trend with Eckel model.

The result showed that there is a relationship between firm bankruptcy and real income smoothing, also the study revelled significant positive relationship between probability of bankruptcy and smoothing income.

Xiaozu (2012) **"Earnings Management and Corporate Restructuring Evidence From "label Removed" ST Firms in China"** The study aimed to examine earnings management behaviour for label removed and special treatment firms in China market between (2002) and (2007). The sample of the study contained all label removed and ST firms, making a total of (163) firms. Using the modified Jones (1991) model to measure earnings management, the empirical results showed that abnormal accruals in label removed ST firms are significantly higher than normal listed firms. Furthermore, ST firms which experienced corporate restructuring activities had less net profit compared with those who did not have asset restructuring.

Abdoli (2013) **"Manipulation of Profit Figure Associated with the Bankruptcy of Firms listed in Tehran Stock Exchange"** The study aimed to examine the relation between earnings management and bankruptcy on one hand and corporate governance role in reducing earnings management on the other hand. The study sample included 95 firms listed on Tehran Stock Exchange from (2007) to (2012). In order to measure earnings management, the modified Jones (1991) model is used. The bankruptcy index had been calculated by using flamer model. The

study did not find a significant relationship between bankruptcy and profit management.

Francescetti *et al.* (2013) **"Do Bankrupt Firms Manipulate Earning More than Non-Bankruptcy Ones?"** The study examined whether financing distressed firms approaching bankruptcy adopt aggressive or fraudulent income increasing accounting practices more frequently than healthy firms. Also to test the academic claim of the correlation of insolvency and fraud and any recommendations contributed of how auditing might be supported in order to detect earning manipulation

Earnings management is detected using Franceschette used Beneish *et al.* (2012) model. The study sample contained 127 Italian firms that filed a bankruptcy petrifaction or state pre bankruptcy agreement under the Italian bankruptcy law. The data covered the period 2009-2011; the study did not find a significant proof of direct relationship between earning manipulation and firms approaching bankruptcy. However, during financial crises firms are more likely to defer cost, aggressively manipulate earnings, and revise upward the estimate of asset useful life or adopting income increasing depreciation methods.

Habib *et al.* (2013) **"Financial Distress, Earnings Management and Market Pricing of Accruals During the Global Financial Crises.** The study aimed to examine the managerial earning practice of financially distressed firms and whether these practices changed during the recent global financial crises. The sample of the study contained 813 listed firms from New Zealand market during 1999-2011. The classification of Mckeown *et al.* (1991), Hopwood *et al.* (1994) and Mutchler *et al.* (1997) is used to classify firms into distressed and non-distressed. Furthermore, the Dechow *et al.* (1995) model is used to detect earnings management practices. The results provided evidence that financially distressed firms manipulate earning downwards and this relationship was not affected by the global financial distress period. Also, the results revealed that New Zealand market considered discretionary accrual to be in their normal level only during non-crisis periods, which means that discretionary accruals were manipulated to some extent during crisis periods.

Nullmeier *et al* (2013) **"Earning Management during Financial Crises"** The researcher aimed to investigate if financial figure give indication regards managerial employment and determine whether it's upward or downward accruals Earning Management during financial crises.

To achieve the research objective the sample of (1,714) firms time between 2006 and 2011 for listed U.S firms, using modified Jones model (McNichols 2002) for calculating accruals.The result showed negative relationship between discretionary accruals and global financial crises period 2008-2009, but positive relationship between discretionary accruals subsequent periods global financial crises period 2010-2011.

Campa *et al* (2013) **"Earning Management among Bankrupt Non-Listed firms: Evidence from Spain"** The study aims to investigate whether non-listed firms that file for bankrupt tend to manage their Earning *more after it's announce bankruptcy comparing with Healthy (non-*bankrupt).The sample of the study contain (362) Spanish bankrupt firm and (362) Healthy firms total of 2,172 firms, the time of the study is three year after each bankrupt firm announce to be bankrupt.

Using kasznik (1999) the discretionary accruals estimated by abnormal working capital accruals.The result showed that non-listed bankrupt firms on average tend to manage their earning upward before its announce bankrupt, Also the study showed that during financial distress situation managers of non-listed firms rely on both sale and accrual manipulation to manipulate profitability, finally the Earning management tools differ across industry.

Etemadi *et al* (2013) **"Effect of Auditor Opinion on Discretionary Accruals Behaviour of Distressed Firm: Empirical Evidences from Iran"** The study aim to determine if pre-bankruptcy firms do apply discretionary accrual behaviour, to achieve the study purposes the sample of (68) Iranian bankrupted firm and (68) non-bankrupt firm (match industry and size) are selected during the period 2006-2009, cross sectional Jones model (Kothari et al 2005) are used to calculate discretionary accruals. The result revelled that during distressed periods failing companies are engaged more in Earning Management than Healthy firm, Secondly distressed Firm use income decreasing earning management Finally the earning management conservative reporting during distress highly correlated to Audit opinion.

3.3 Jordanian Studies

Mashoka (2010) **"Earnings Management and Loss Reversal"**

The study aims to detect and measure earnings management using modified Jones model (1991) for listed companies in Jordan. Also, to examine market reaction to loss reversal. The sample includes 37 industrial companies from both first and second markets during the period 2002-2006. The result provides evidence of earnings management for companies

listed on the first market, companies that report a loss in previous periods manipulate the following periods to report profit to avoid being dropped back to the second market.

Abed *et al.,* (2012) **"Corporate Governance and Earnings Management: Jordan Evidence"**

The study aims to examine the relationship between earnings management and characteristic of corporate governance. In order to achieve the study objective, a sample of 65 non-financial firms was selected between 2006-2009. The modified Jones model is used to calculate discretionary accruals as a proxy of practising earnings management. The result shows that only the size of board of director has significant relationship with earnings management.

Al-Fayoumi *et al* (2012) **"Ownership Structure and Earnings Management in Emerging Markets: the Case of Jordan"**

The study examines the relationship between earnings management and ownership structure for Jordanian industrial firm during 2001-2005,using discretionary accruals to calculate for earnings management, and three types of ownership forms: *insiders, institutional and block holder.* Using General Method of Moment (GMM). The result indicates that inside

ownership positively affect earnings management, which implies that Jordanian insiders tend to make discretionary accounting choices. On the other hand, block holdesr and institutional investors have no significant relationship with earnings management because they do not materially have direct impact on management choices and financial statement preparation.

Hamdan (2012) **"Factor Influencing the Level of Earnings Quality: evidence from The Jordanian Industrial Corporation"**

The study aims at verifying quality of earnings in the industrial Corporation listed on Amman stock Exchange by examining the factor that affect the level of earnings quality: cccounting conservatism, company size, debt contract, ROI, corporate governance, auditing quality and audit committees. In order to measure the level of earnings quality the modified Jones (1991) and Richardson *et al.,* (2005) models are used on a sample of 50 industrial companies listed on ASE between 2004-2009. The results show a high level of earnings quality in Jordanian industrial corporation. Also the company size, debt contract, and audit quality have effect on the earnings quality.

Ramadan (2012) " **Earnings Management and Investment Behaviour: the case of Jordan"**

The study aims to assess the effect of earnings management on the investment behaviour of Jordanian industrial firms. The sample of the study includes all Jordanian industrial firms listed on ASE between 2001-2010 with 702 year observation. To accomplish the study objective, the modified Jones model is used to calculate discretionary accruals and two proxies for the investment behaviour (1) investment level model and (2) external financing model. The result shows positive relationship between practising earnings management and investment in the following year, and usage of earnings management deliberately as a mean to increase the company ability of accessing external finance.

3.4 Distinguishing Features of the Current Study

This study examines the activities of earnings management in Jordanian firms that are faced financial difficulties to see whether these difficulties that face them in some way to manage their earnings. The study included all Jordanian industrial firms listed between 2006 and 2010, which is a period that witnessed historic global economic changes. Also, to the best of the researcher's knowledge, the current study is the first study done in

Jordan and in the Middle East on managerial choices during financial distress periods.

3.5 Hypotheses Development

3.5.1 Earnings Management and Financial Distress

Financial distress is a problem that faces firms and reduces their ability to pay dept; it also limits the profit generation process. During such times of difficulty, management expect their bonuses to be cut or position to be replaced; they sometimes try to escape from this insolvency by changing accounting choices or deliberate the financial statement numbers to conceal difficulties evidence. It proved by several studies that firms with financial difficulties choose some way to increase earnings or their related components. (Arnedo *et al*, 2008) argue that firms in financial distress will apply earnings management. by overstating the receivables, implicating revenue overstating, and overstating inventory. These findings are confirmed by evidence reported by (Rosner, 2003). Found that the receivable and inventory are the most used lines in the accounts for earnings management He also found that firms which become bankrupt but did not previously appear distressed use income increasing earnings management techniques. Chen *et al* (2010) found that distressed firms in China employ income increasing earnings management techniques to avoid

being de-listed, and fewer firms has reduction in earnings. De Angelo and Linda (1990) found that more than half of firms with severe financial distress would cut the dividend payment or even cancel the dividend proposal. This empirical evidence demonstrate the negative effect firms in financial difficulties, If firms with financial difficulties or labelled with ST (Especial Treatment) are not able to manage the situation, shareholder's wealth may be harmed with no dividend received. This is confirmed also with the research performed by Butler *et al.* (2004); argue that firms in financial distress will use accruals to convey their financial distress. In particular, abnormal accruals are more negative (positive) for firms with extreme poor (good) performance. Based on the previous discussion, the following hypothesis is proposed;

> H_1: *There is a significant positive relationship between financial distress and earnings management practices in Jordanian firms listed on ASE.*

3.5.2 Percentage of non-executive directors on the board

An important aspect of effective corporate governance is "the recognition that the specific interest of executive management and the wider interest of the firm at times diverge" (Cadbury committee, 1992, p: 21). Independent boards play an important role in this situation. This is expected thus, effectiveness of the board in reducing the earnings management practices is

contingent on the relative independence of its members. (Beasly,1996) and (Dechow *et al,*1996) find that outside directors is negatively related with incidence of financial misstatement , more specifically (Peasnell *et al*, 2000) and (Klein, 2002) find evidence that the proportion of outside directors is negatively related to the level of earnings management Based on the previous discussion, the following hypothesis is proposed;

H2: *There is significant negative relationship between board of director independence and earnings management practices in Jordanian firms listed on ASE.*

3.5.3. Ownership concentration of board members

(Akhtaruddin and Haron , 2010) argue that ownership concentration reflect the influence of the majority shareholders. Outside investors and minority shareholders have no access to the firm's information instead, they depend on the reported financial statement, the ownership /earning management relationship is develop upon two possible justification *firstly* Jensen and Meckling theory, conflict of interest between owners and managers make tendency toward monitoring action management and reducing the earning management practices this is alignment effect of ownership concentration (Dechow *et al*, 1996) , (chen *et al*, 2010) fond negative relationship

between ownership concentration and earning management . *Secondly Large shareholders can exercise their control rights to create private gain,* and expropriating minority shareholders (expropriation hypothesis) this create positive relationship between ownership concentration and earning management, Choi *et al* (2004), Kim and Yoon (2008) document that earnings management is positively to ownership concentration. Based on the previous discussion, the following hypothesis is proposed;

> H3: *There is significant positive relationship between boards of director ownership concentration and earnings management practices in Jordanian firms listed on ASE.*

3.5.4 Non-Jordanian investment

Foreign ownership is viewed as a mechanism for improving corporate governance (Bokpin and Isshaq, 2009), then it's supposed to reduce earnings management practices with more managerial oversight by foreign investors. (Lel, 2013) found that foreign ownership is associated with lower earnings management, justifying the result by: The investment by foreign institutional investor at a firm is followed by an increase in foreign director's presence on the firm's board and audit committee; this provides an effective cross-border governance mechanism in curbing earning

management activities. Based on the previous discussion the following hypothesis is proposed:

H4: *There is a significant negative relationship between non-Jordanian investment and earnings management in Jordanian firms listed on ASE.*

3.5.5 Board size

Increasing the number of board members improves the capability of the board in monitoring and controlling management actions, Gandia (2008) this enhances the transparency by management, which implies more control over management choices and then reduces the earnings management practices. However, previous studies revealed the opposite direction of results. Beasly (1996) found a positive relationship between board size and the likelihood of financial statement fraud whereas; Abbott *et al.* (2000) found no relationship between earnings management practices and financial distress. Based on the previous discussion, the following hypothesis is proposed;

H5: *There is a significant positive relationship between board of director size and earnings*

management practices in Jordanian firms listed on ASE.

3.5.6 Firm size

Do there is any difference between large firms and small firm in practicing earning management? Barton and Simko (2002) indicate that large firms face more pressure to meet or beat the analysts' expectations. Myers and Skinner (1999) compiled empirical evidence that large firms tend more to report non-accurate earnings. On the other hand, Beasley, *et al.* (2000) reported that deceitful firms in technology, health-care, and financial services have less internal audit support and are accompanied by weak corporate governance mechanisms. Large firms face more pressure than small firms; therefore, larger firms are more likely to design and maintain more sophisticated and effective internal control systems in comparison to smaller firms, reducing the likelihood of manipulating earnings by management. Based on the previous discussion the following hypothesis is proposed:

H6: *There is a significant negative relationship between the firm's size and earnings management in Jordanian firms listed on ASE.*

3.5.7 Leverage

The firm decision of agreeing debt contract to obtain fund implies adding a new contracting party (i.e. the lender) to the firm's existing stakeholders. Consistent with the agency theory, the close lender monitoring hypothesis by De Anglo *et al.* (1994) posits that the relationship between lenders and borrowers is governed by the firm's accounting numbers and that lenders result seek to protect their interest. Sweeny (1994) found evidence that managers adopt income increasing accounting choices as a response to the threat of potential default. Also, Watts and Zimmerman (1990) state that firms with higher leverage levels are more likely to adopt accounting procedures that increase their income. On the other hand, De Anglo *et al.* (1994) studied the accounting choices of a sample of troubled firms with binding debt covenant and found that managers of these firms adopted accounting choices that largely reflect their firms' financial difficulties

Based on the previous discussion the following hypothesis is proposed:

H7: *There is a significant positive relationship between the firm's financial leverage and earnings management practices in Jordanian firms listed on ASE.*

3.5.8 Auditing Firm

De Angelo (1981) argues that the Big4 provide better quality audits than non-Big4 auditors, empirically. Becker *et al.* (1998), Francis *et al.* (1999) and Krishnan (2003) demonstrated that Big4 auditors are better at constraining client earnings management compared to non-Big4 auditors. They found that clients of non-Big4 auditors have higher levels of discretionary accruals. In addition, Zhou and Elder (2003) and Chen et al. (2005) found that Big 4 auditors are associated with less earnings management in firms. Based on the previous discussion the following hypothesis is proposed:

> H8: *There is a significant negative relationship between audit firm and Earnings management in Jordanian firms listed on ASE*

3.5.9 Growth

The accounting literature has extensively examined the impact of firm's growth opportunities on managerial behavior and decision making. Firms with high-growth opportunities are reflected by a higher proportion of future discretionary investment expenditures by managers (Myers, 1977). Similar results are reported by Watts and Zimmerman, (1986) and Skinner (1993). Managers in high-growth firms are more likely to have

opportunistic behavior, which will further aggravate the situation of lower observe ability in growth firms. As a result of lower observe-ability of managers' activities and higher probability for managers' opportunistic behavior, growth firms will be more risky than their non-high growth counterparts (Smith and Watts 1992). Also, controls in high-growth firms are less likely to be effective (Andersen *et al.*, 1993). A weak internal control environment also has the potential to allow "intentionally biased accruals through earnings management" (Doyle *et al.*, 2007). Therefore, high growth firms are more likely to demonstrate earnings management characteristics Based. On the previous discussion the following hypothesis is proposed:

H9: *There is a significant positive relationship between the firm's growth and earnings management in Jordanian firms listed on ASE.*

CHAPTER FOUR:

METHODOLOGY

4.1 Introduction

The main objective of the current study is to empirically examine the earnings management behaviour of financially distressed firms in Jordanian firms listed on the ASE. This chapter presents the methodology used in the current study to accomplish this objective.

4.2 Population and Sample

The population of the study includes all industrial Jordanian firms listed on the ASE for the period 2006-2010. The total number of these firms at the end of 2010 is (78), the sample of the study includes only the firms that meet the following criteria:

- The firm should be listed on ASE during the study period (2005-2010).
- Firms with unavailable data are excluded.
- Firms ever going through consolidation, bankruptcy, or reorganization during the period 2006-2010 are excluded to avoid biased results due to the effect of these events on the type and amount of information disclosed in their annual reports.

Applying these criteria resulted in a sample composed of (51) firms with (255) observations (pooled data). Appendix (1) shows a list of the sampled firms.

4.3 Data sources

The data needed to carry out the current study is collected from the firms' annual reports for the years 2006-2010 available on the ASE website. However, some data elements are collected from the Company Guide of publicly held corporations prepared by ASE. Content analysis is used to extract the required data from the annual reports of these firms.

4.4 Variables and Model

4.4.1 Dependent Variables

Earnings management (EM) is the dependent variable in the current study. The model used to compute earnings management is the Modified Jones model.

4.4.2 The Modified Jones Model

Following the approach adopted by (Larcker and Richardson, 2004), the study uses the modified version of Jones' model with book to market ratio (BM) and operating cash flow (OCF) to each sampled firm annual reports. *BM* controls for expected growth in operations. If left uncontrolled, growth will be picked up as discretionary accruals. *CFO* controls for current operating performance. This is important because (Dechow et al, 1995) find that discretionary accruals are likely to be mis-specified for firms with extreme levels of performance. (Larcker and Richardson, 2004) note that

their model is superior to the modified Jones model in several ways: it has a greater explanatory power, it identifies unexpected accruals that are less persistent than other components of earnings, it detects earnings management identified in SEC enforcement actions, and it identifies discretionary accruals that are associated with lower future earnings and lower future stock returns.

Total Accruals (TA) are computed, as in many other empirical studies (e.g.: Jones, 1991; Dechow et *al.,* 1995; Kothari et *al.*, 2005; and Raman and Shahrur, 2008) by using the following expression:

$TAC_{it} = \Delta CA_{it} - \Delta CL_{it} - \Delta Cash_{it} + \Delta STD_{it} - Dep_{it}$ .... (1)

Where;

TAC_{it}	total accrual for the firm i in year t
ΔCA_{it}	change in current asset for the firm i in year t
ΔCL_{it}	change in current liabilities for the firm i in year t
$\Delta Cash_{it}$	*change in cash and cash equivalents for the firm i in year t*
ΔSTD_{it}	change in short term debt included in current liabilities for the firm i in year t
Dep_{it}	depreciation and amortization expense for the firm i in year t

Equation 2 below is estimated for each firm and fiscal year combination:

$$TAC_{it}/TA_{it-1} = \alpha_1 (1/ TA_{it-1}) + \alpha_2 (\Delta REV_{it} - \Delta AR_{it})/ TA_{it-1}) + \alpha_3 (PPE_{it}/ TA_{it-1})$$

$$+ \alpha_4 (BM_{it}/ TA_{it-1}) + \alpha_5 (CFO_{it} / TA_{it-1}) + e.................. \quad (2)$$

Where:

TAC_{it}	total accrual for firm i in year t
TA_{it-1}	total asset for firm i at the beginning of the year t
ΔREV_{it}	change in operating revenue for firm i in year t
ΔAR_{it}	change in net receivables for firm i in year t
PPE_{it}	gross property, plant and equipment for firm i in year t
BM	the book value of common equity over the market value of common equity
OCF_{it}	operating cash flow for the firm i in year t
α_1- α_5	regression parameters
e	error term

Non-discretionary accruals (NDAC) are measured for year and fiscal year combination using the equation (3) as follows:

$$NDAC_{it}/ TA_{it-1} = \hat{a}_1 (1/ TA_{it-1}) + \hat{a}_2 (\Delta REV_{it} - \Delta AR_{it}) + \hat{a}_3 PPE_{it} + \hat{a}_4 BM_{it}$$

$$+ \hat{a}_5 CFO_{it} + e .... \quad (3)$$

Where:

$NDAC_{it}$	non-discretionary accruals for firm i in year t
TA_{it-1}	total asset for firm i at the beginning of the year t

ΔREV_{it}	change in operating revenue for firm i in year t
ΔAR_{it}	change in net receivables for firm i in year t
PPE_{it}	gross property, plant and equipment for firm i in year t
BM	the book value of common equity over the market value of common equity
OCF_{it}	operating cash flow for the firm i in year t
$\hat{a}_1$- $\hat{a}_5$	regression parameters
e	error term

The difference between total accruals and the non-discretionary component of accruals is considered as Discretionary Accruals (DAC) as stated in equation (4):

$DAC_{it}= TAC_{it}- NDAC_{it}$.. (4)

Where:

DAC_{it}	discretionary accruals for firm i in year t
TAC_{it}	total accrual for the firm i in year t
$NDAC_{it}$	non-discretionary accruals for firm i in year t

To determine whether earning management is practiced or not in a particular year, the following steps are followed:

- For each firm, a mean score for the discretionary accruals values across the years 2006-2010 is calculated.

- For each firm, the discretionary accruals value for each year across 2006-2010 is compared to the mean score for that firm.
- If the discretionary accruals value for the year is greater than the calculated mean, then earning management is practiced in that particular year.
- If the discretionary accruals value for the year less than the calculated mean, then earning management is not practiced in that particular year.

4.4.3 Independent and control variables

- **Financial Distress (FDIS)**

Since the seminal work of (Beaver, 1966), different bankruptcy models have been developed and tested to predict financial distress. However, the current study uses the Altman Z-score model (1986). This model is the most popular and dominant model for forecasting financial distress depending on calculating financial ratio as below:

$$Z\text{-}Score = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + .999X5$$

Where:

X1 working capital/ total asset (measure net liquid assets of the firm relative to the total capitalization)

X2 retained earnings/ total asset (measure cumulative profitability over time and linked it to the age and leverage)

X3 earnings before interest and taxes/total assets (measure of the true productivity of the firm's assets)

X4 market value of equity/book value of total liabilities (measure shows how much the firm's assets can decline in value before the liabilities exceed the assets and the firm becomes insolvent)

X5 sales/total assets (measure sales generating ability from the assets of the firm)

After calculating each component of the z-score formula, the value of z can be coded as below:

Safe zone: if the z value above 2.99, it is regarded as no probability of distress

Grey zone: if the z values are between 1.81 and 2.99

Distress zone: if the z values are less than 1.81, it is regarded as high probability of distress.

- **Independent board of director (NEXE)**

Calculated by the percentage of non-executive members on the board of directors.

- **Ownership concentration of board of director (BOWN)**

Calculated by the percentage of shares owned by the board members.

- **Non-Jordanian ownership (NJOW)**

Calculated by the percentage of non-Jordanian ownership in the firm.

- **Size of board of director (BODS)**

Calculated by the number of members on the board of directors.

- **Firm size (FSIZ)**

Calculated by the natural logarithm of total assets.

- **Financial leverage (FLEV)**

Calculated by the total liabilities over total assets

- **Audit quality (AUDT)**

Calculated as dummy variable assigned a value of 1 if the auditor is one of the big four and zero otherwise.

- **Growth (GROW)**

Calculated by the ratio of market value of equity over book value of assets.

4.5 Regression model

In order to test the study's hypotheses, multiple linear regression analysis is employed.

The study's model:

$$EM = \beta_0 + \beta_1\ FDIS + \beta_2\ NEXE + \beta_3\ BOWN + \beta_4\ NJOW + \beta_5\ BODS + \beta_6\ Log\ TA + \beta_7\ FLEV + \beta_8\ AUDT + \beta_9\ GROW + e$$

Where:

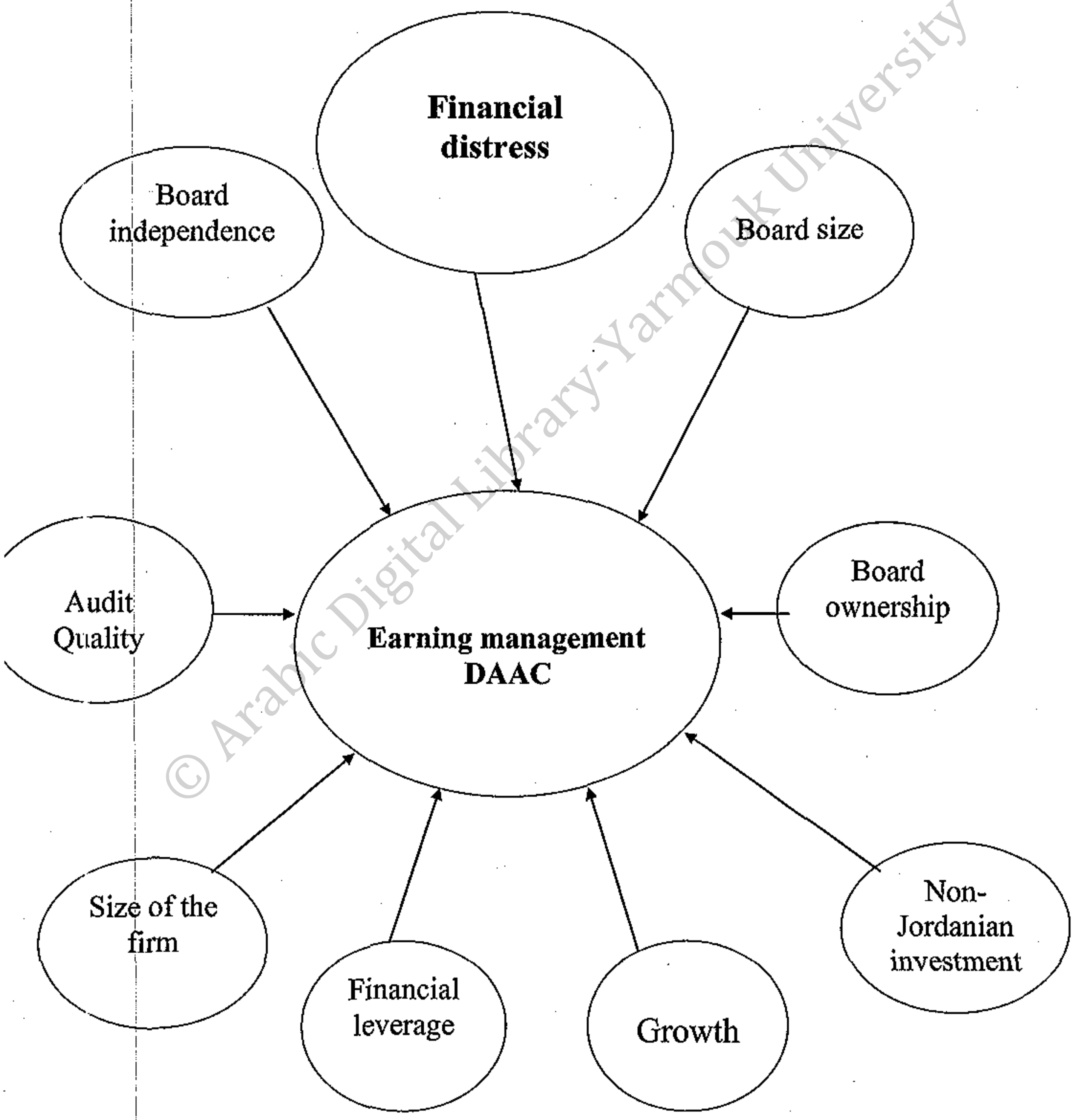
EM	Earnings management, a continuous variable measured using The modified Jones model.
FDIS	Financial distress expressed as a dummy variable assigned 0 if the z-score in the healthy zone, and 1 if the z-score in the distress zone. Observations in the gray zone are dropped from the analysis.
NEXE	Board independence
BOWN	Ownership concentration of board of director
NJOW	Non-Jordanian ownership
BODS	Size of board of director
FSIZ	Firm size
FLEV	Financial leverage
AUDT	Audit quality
GROW	Firm Growth

ß = the regression coefficient

e = error term

i=0, 1,..., 8.

Figure 1 Charts of study variables



CHAPTER FIVE:

ANALYSIS OF RESULTS

5.1 Introduction

This chapter aims at analyzing the estimation result of the empirical model used in the current study to accomplish the study's objective. Therefore, it presents descriptive statistics and result of regression for the variables used in the study.

5.2 Descriptive Analysis

This section presents the descriptive statistics for the dependent and independent variables used in the current study. Table (3) shows the summary statistics for these variables.

TABLE (3): Descriptive Statics For the Variables of the Study

Variables	Obs	Min	Max	Mean	S. D
FDIS	213	0	1.00	0.579	0.03
NEXE	255	0.40	1.00	0.90	0.14
BOWN	255	0.08	0.97	0.42	0.23
NJOW	255	0.00	0.94	0.45	0.50
BODS	255	5	13	7.88	1.02
FSIZ (log)	255	0.00	0.94	0.45	0.50
FSIZ (JD, million)	255	4	1,010	52	137
FLEV	255	0.0005	0.87	0.38	0.29
AUDT	255	0	1	0.27	0.45
GROW	255	0.03	5.94	1.09	0.95
EM (JD, million)	255	-310	160	0.006	27
EM Classification	255	0	1	0.616	0.48

- Almost 58% of Jordanian industrial firms are financially distressed.
- The percentage of non-executive board members in Jordanian industrial firms is 90% (S.D = 0.14). Thus, boards in these firms can be described as highly independent.
- On average, the percentage of board ownership concentration in Jordanian industrial firms is approximately 42% (S.D= 0.23).
- On average, the percentage of non-Jordanian board members is approximately 45% (S.D=0.50).
- Board size in Jordanian firms ranges between 5 and 13 members with an average size of approximately 8 members (SD= 1.02). Margolis and Sheila (2011) study of 473 public companies between 1988 and 1999 they indicate that most public companies have boards in the range of 8 to 11 members with the mean being 9.5.
- The sampled firms vary in their size with an average total assets of JD52 million. The sizes of the firms ranges between small and very large , the sample of the study include equal number (approximately) of small and

large firm so the sample cannot be described by large size or small sizes firm .

- The financial leverage is approximately 38% (SD= 0.29). This means that Jordanian industrial firms are not highly leveraged. This may be attributed to the absence of developed bonds market and the adoption of conservative credit policies by commercial banks. The high standard deviation implies that firms are significantly different in their policies.

- Audit quality in Jordanian industrial firms is relatively low with only 27% of firms are audited by big-4.

- Growth opportunity for the selected sample have a minimum value of .03 and *maximum of 5.94, This indicate variance of distribution for* growth, with a mean of 1.09%.

- Discretionary accrual in dollars' range between JD -310 million and JD160 million with a standard deviation of 27 million. This indicate high variation between firms in applying earnings management,

- Almost 62% of Jordanian industrial firms practises earnings management

- The result of the Cross Tab analysis (Appendix 2) shows that almost, 70% of the financially distressed firms practices earnings management. Furthermore, 50% of the non-distressed firms practices earnings management. This implies that financial distress is not the only motivator for firms to deliberately manage their earnings.

5.3 Testing regression assumptions

Pooled OLS regression analysis is used to test the study's model. However, the assumptions and problems of the multiple regression analysis rely upon a number of classical assumptions. These assumptions are critical for the valid interpretation of the regression estimates (Gujarati, 2003). Violations of these assumptions may affect the credibility of the results obtained (Osborne and Elaine, 2003). The standard regression problems relating to normality, multicollinearity, and homoscedasticity, are examined. The results are presented in the following subsections.

5.3.1 Normality

The descriptive analysis of the independent variables discussed above shows dispersions in firm size as revealed by their standard deviation. This indicates a normality problem. The log transformation process has been performed on this variable to solve the normality problem. Furthermore, the classical linear regression model assumes that the distribution of the

regression residuals is normal (Gujarati, 2003). In the current study, normality of the residuals was examined by plotting the histograms and the joint Skewness and Kurtosis test. The normal curve superimposed in the histograms approximate to bell shapes. This indicates that the regressions' residuals have, roughly, the shape of a normal distribution. Furthermore, the insignificant results of the joint Skewness and Kurtosis test shown in Table 4 indicate that normality was not problematic in the current study.

TABLE 4: Skewness / Kurtosis Tests For Normality

Variable	Pr (Skewness)	Pr (Kurtosis)	Joint Test	
			adj Chi2	Pr> Chi2
Residuals	0.74	0.14	2.36	0.31

5.3.2 Multicollinearity

Multicollinearity refers to the presence of a high level of correlation among the independent variables. This may lead to incorrect inferences and conclusions because it makes it difficult to identify each variable contribution (Barrow 1988, multicollinearity was assessed by the variance inflation factor (VIF). Gujarati, (2003) suggested that if the VIF of a variable is greater than 10, then the variable is considered highly collinear. In the current study, the VIF for the variables investigated were well below the accepted levels 10% suggested by Gujarati (2003). These statistics are

shown as part of Table (5) that summarizes the results of the regression analysis. Based on the results of the VIF, it can be concluded that multicollinearity was not problematic in the current study

5.3.3 *Heteroscedasticity*

Heteroscedasticity means that the variance of residuals differs across all levels of the independent variables. Marked heteroscedasticity may cause serious distortion of the findings (Berry and Feldman, 1985). In the current study, this assumption was examined by the Breusch-Pagan-Godfrey test (PBG). The Breusch-Pagan-Godfrey test is found to be statistically significant (Prob > chi2 = 0.0435). This implies that the homoscedasticity assumption is violated (Gujarati, 2003). Fortunately, Stata 11 corrects the model's results to adjust for heteroscedasticity.

5.4 Regression Analysis

A summary of the results of the pooled OLS regression analysis performed on the study model is presented in Table (5). According to the Table, the general model has an adjusted R^2 of 0.145. This means that the independent variables explain almost 14.5% of the earnings management in Jordanian industrial firms' annual reports. Furthermore, the high probability of the F statistic (.001) means that the independent variables are jointly significant

in explaining the earnings management in Jordanian firms. However, not all independent variables have statistically significant coefficients. Table (5) also shows that out of the 9 hypothesised independent variables, 5 independent variables have statistically significant relationships with the earnings management.

TABLE (5) (Regression Results)

	Dependent Variable EM
Independent Variables	**Model[1]**
FDIS	1.096 (.032)*
NEXD	-4.935 (.007)**
BOWN	-2.644 (.009)**
NJOW	-.013 (.978)
BODS	-.233 (.487)
FSIZ	-.256 (.684)
FLEV	3.512 (.000)**
AUDT	.149 (.781)
GROW	-1.846 (.002)**

Intercept	34.598
Adj R^2	.145
F	.000
VIF	1.06-1.54

* Significant at .05
** Significant at .01
1 corrected for heteroscedasticity

According to Table (5), financial distress (FDIS) has a significant positive relationships with earnings management (β= 1.096, ρ=.032). This means that Jordanian firms that face financial distress do manipulate their earnings.

The same table shows that the percentage of non-executive members (NEX), boards ownership concentration (BOWN), and growth (GROW) have significant negative relationships with earnings management (β= -4.935, ρ= .007), (β= -2.644, ρ= .009) and (β= -1.846, ρ= .002) respectively. This means that the higher the level of ownership concentration, the less earnings management is practiced by firms. Similarly, as the number of non-executive directors increases, the earnings management decrease. In addition, in low-growth firms earnings management is practised more than in high-growth firms.

Board size (BODS) is negatively related to Earnings management at (β=-2.33, ρ= .487). On the other hand, the financial leverage (FLEV) is significantly positively related to earnings management (β=3.512, ρ= .000),

this implies that firms manipulate earnings to maintain debt covenant stated on contracts to avoid penalty or to provide more favourable image about the firm.

5.5 Testing hypotheses

This section considers each of the 9 hypotheses established in Chapter Three using the result of the regression analysis reported in Table 5 above. The criteria used to test the hypotheses include the sign (direction) of the beta coefficient (β) of the independent variable and the level of significance (ρ) as follows:

- If the estimated sign of (β) is the same as the expected sign, then the hypothesis is supported.
- If the level of significance (ρ) ≤ .05, then the support is significant.
- To accept a hypothesis, both criteria have to be met.

H_1: There is a positive relationship between financial distress and earnings management practices in Jordanian firms listed on ASE.

Based on the result of the regression analysis, this hypothesis is accepted. This means that Jordanians distressed firms practice earnings management. This result is consistent with Arnedo *et al* (2008) , Ronser (2003) reported a similar result when he tested the distressed firms that were going into

bankruptcy, but did not appear distressed before. By applying earnings management behaviour they practices income-increasing earnings management. The Jordanian firms might be applying earnings management to keep their reputation in the market so as not to lose more investments opportunities. Chen *et al.* (2010) found similar results. He concluded that firms practices earning management to avoid being de-listed. Jordanian firms might be managing their earnings to avoid being de-listed. Butler (2004) reached consistent results but he justified the result and concluded that faced financial distress try to practice earnings management to convey their difficulties.

H2: There is a significant negative relationship between board of director independence and earnings management practices in Jordanian firms listed on ASE.

Based on the result of the regression analysis the hypothesis is accepted. More independent boards increase monitoring over management actions and limit the earnings management practices. The result is consistent with Beasly (1996) , Dechow *et al.*, (1996), Peasnell *et al.*, (2000) and Klein (2002)

H3: There is significant positive relationship between board of director ownership concentration and Earnings management in Jordanian firms listed on ASE.

Based on the result of the regression analysis, this hypothesis is not accepted. The result is consistent with Dechow *et al.*, (1996), Chen *et al.*, (2010) and inconsistent with Jaggi & Tsui (2007), Choi et al (2004), and Kim &Yoon (2008).

H4: There is a negative significant relationship between foreign investment and Earnings management in Jordanian firms listed on ASE

Based on the results of regression analysis, this hypothesis is not accepted. This result is not consistent with |Lel (2013).

H5: There is positive relationship between boards' size and earnings management practices in Jordanian firms listed on ASE.

Based on the results of the regression analysis, this hypothesis is not accepted, this result is inconsistent with relevant literature. Beasly (1996) found a positive relationship between boards' size and earnings

management. On the other hand Abbott *et al*, (2000) found. That there is no relationship between boards size and earnings management.

H6: There is a negative relationship between the firm's size and earnings management in Jordanian firms listed on ASE.

Based on the results of the regression analysis, this hypothesis is not accepted. This result is not consistent with; Barton (2002), Myers and skinner (2000) and Beasly (2000)

H7: There is positive relationship between the firm's financial leverage and earnings management in Jordanian firms listed on ASE.

Based on the results of the regression analysis, this hypothesis is accepted. This result is very important in the area of earnings management. It is consistent with almost all the relevant literature. The debt financing in the context of firms have tough conditions where the lender imposes too many debt covenant conditions to guarantee their rights and protect themselves from default risks. This result is consistent with Sweeny (1994) and Watts and Zimmerman (1990). Both found a positive relationship, De Anglo *et al,* (1994) also found a positive relationship with leverage.

H8: There is a negative relationship between audit firm and Earnings management in Jordanian firms listed on ASE.

Based on the results of the regression analysis, this hypothesis is not accepted.

H9: *There is positive relationship between the firm's growth and earnings management in Jordanian firms listed on ASE.*

Based on the results of the regression analysis, this hypothesis is not accepted, this result is consistent with Watts and Zimmerman (1986) and Myers (1977), Skinner (1993), Smith and Watts (1992), Andrsen *et al*, (1993), and Doyle *et al*, (2007). However the similer as result is the same as Chen and Liu (2010).

CHAPTER SIX:

CONCLUSION

6.1 Introduction

This chapter summarizes the main findings of this study and provides the conclusion by analyzing the results using standardized methods that were adapted to the nature of the data in addition to some recommendations.

6.2 Summary of Research Results and Conclusions

This study has examined whether distressed Jordanian firms practice earnings management. The study used regression to analyze the data collected from *51 industrial firms* listed on ASE between *2006-2010*. Overall, the study has found the following:

1- *Almost 62% of Jordanian industrial firms* practice earnings management to escape from being distress.

2- The larger the size of board of director, the lower presence of earning *management practise.*

3- As the percentage of debt financing increases, the Jordanian firm's management tend to manage earning more than firms rely on other sort of financing.

4- Jordanian firms with higher growth opportunities engaged with less earnings management.

5- The board of directors on the Jordanian industrial firms can be described as being independent, where the average percentage of non-executive directors on board is 90%.

6- The Jordanian industrial firms have high ownership concentration.

7- The non Jordanian investment in Jordanian firms is about a half of total investments.

6.3 Recommendations

Based on the results reached, the study recommends the following:

1- Financial distress needs more attention from researchers in Jordanian.

2- Policy makers may need to think of new means and methods to protect the rights of stakeholders in obtaining reliable financial statements information about their interest. One possible suggestion is to establish qualified governmental unit to review audited financial statements.

3- Establish consulting governmental unit, with well trained staff on a topic of troubled companies, specializing in determining procedures for troubled companies and mechanisms to adjust their positions, also provide follow up plans and program.

4-Researchers might further investigate other variables that explain the residual incentive of earnings management in the annual reports of Jordanian firms using longitudinal data analysis.

6.4 REFERENCES

Abbot, L. J., S. Parker, and G.F. peters. (2000), The effectiveness of the blue ribbon committee recommendation in mitigating financial misstatement: An empirical study, Working paper.

Abdoli, M., jalali, M., Fatima, j., Sattari, B. (2013), Manipulation of profit figures associated with the bankruptcy of firms listed in Tehran stock exchange, *International Research Journal of Applied and Basic Sciences*, 6(12) ,1829:1835.

Abed, S., Al-Attar, A., Suwaidan, M. (2012), Corporate Governance and Earnings Management: Jordan Evidence, *International Business Research*, 5(1), 2012.

Accounting-simplified.com " What is financial Distress "

Akhtaruddin, M., & Haron, H. (2010). Board Ownership, Audit Committees' Effectiveness and Corporate Voluntary Disclosures. *Asian Review of Accouting*, 18(1),68-82.

Al-Fayoumi, N., Abuzayed, B., & Alexander, D. (2010). Ownership Structure and Earnings Management in Emerging Markets: The Case of Jordan. *International Research Journal of Finance and Economics, 38.*

Al-khabash, A. A., & Al-Thuneibat, A. A. (2009). Earnings management practices from the perspective of external and internal auditors: Evidence from Jordan. *Managerial Auditing Journal, 24*(1), 58-80.

Al-Momani, M.A. (2006). The study and evaluation of the flexibility available in accounting standards used by mangers for earnings management practice and its understanding by investors: an empirical study, unpublished doctoral dissertation. Amman Arab University for Graduate Studies, Amman.

Al sharairi, Malek A.R. (2012). Pre-merger Earnings Management: Sarbanes Oxley,Leverage and Non-cash Acquisition Premia, Durham theses, Durham University. Durham E-Theses Online: http://etheses.dur.ac.uk/3407/

ALrai Newspaper/ economic / date of publishing /17/11/2013 Available at: http://www.alrai.com/article/616994.html.

Altman, E., (1968). Financial Ratio, Discriminate analysis and the prediction of corporate bankruptcy, *Journal of finance*, 23, (Sep), 589-609.

Amman stock Exchange Web Site . URL: http:// www. exchange.jo.

Andersen, D., J. Francis, and D. Stokes. (1993). Auditing, directorships and the demand for monitoring. *Journal of Accounting and Public Policy*, 12 (4), 353-375.

Arnedo, L., Lizarraga, F. and Sánchez, S. (2008). Going-concern Uncertainties in Pre-bankrupt Audit Reports: New Evidence Regarding Discretionary Accruals and Wording Ambiguity.
Public University of Navarra, Spain, *International Journal of Auditing*, 12, 25–44.

Balsam, S., 1998. Discretionary accounting choices and CEO compensation. *Contemporary Accounting Research* 15 (3): 229-252.

Barrow, M. (1988). Statistics for Economics, Accounting and Business Studies, longman Group UK Limited, England.

Barton, j.and P.Simko. (2002). The balance sheet as an earnings management constraint. *The accounting review* 77, 1-27.

Bartram, S.H. and Bodnar, G.M. (2009). No. place to hide: the global crisis in equity markets in 2008/2009 , *Journal of International Money and Finance*, 28(8), 1246-1292.

Beasley, M. S., J. V. Carcello, D. R. Hermanson, and P. D. Lapides. (2000). Fraudulent Financial Reporting: Consideration of Industry Traits and Corporate Governance Mechanisms . *Accounting Horizon* 14 (4), 441-454.

Beasley, M.S., (1996). An Empirical Analysis of the relation Between Board of Director Composition and financial statement fraud. *The Accounting Review*, 71 (Oct),443-465.

Beattie, V., Brown, D., Ewers, D., John, B., Manson, S., Thomas, D., and Turner, M. (1994). Extraordinary Items and Income Smoothing: A Positive Accounting Approach, *Journal of Business Finance and Accounting*, 21(6), 791-811.

Beaver, W. H. (1966). Financial ratios as predictors of failures. *Empirical Research In Accounting, Supplement to Journal of Accounting Research*, (4), 71-11.

Becker, C.L., M.L., DeFond, J., Jiambalvo and K.R., Subramanyam, (1998). The effect of audit quality on earnings management, *Contemporary Accounting Research*, 15, (1),1-24.

Beneish, M. D. (2001). "Earnings Management: A Perspective." Managerial Finance 27(12):3-17.

Beneish., (2012). The Detection of Earnings Manipulation. *Financial Analysts Journal*, 55(5), 24-36.

Berry, W. D., & Feldman, S. (1985). Multiple Regressions in Practice. Sage University Paper Series on Quantitative Applications in the Social Sciences, series no. 07-050). Newbury Park.

Bokpin, G.A. and Isshaq, Z. (2009). Corporate Governance, Disclosure And Foreign Share Ownership On The Ghana Stock Exchange. *Managerial Auditing Journal*, 24 (6) , 688-703.

Booth, L., Aivazian, V., Demirguc-Kunt, A. and Maksimovic, V. 2001. "Capital Structures in Developing Countries", *Journal of Finance*, 56(1), 87-130.

Butler, M., A. J. Leone, and M. Willenborg. (2004). An Empirical Analysis of Auditor Reporting and its Association with Abnormal Accruals. *Journal of Accounting and Economics*, 37, 139-165.

Cahan, S. (1992). The Effect of Antitrust Investigation on Discretionary Accruals: A Refined Test of the Political Cost Hypothesis, *the Accounting Review*. 67 (1), 77–96.

Campa, Domenico., Minano, Maria-del-Mar, (2013).Earning Management among Bankrupt Non-listed Firms: Evidence From Spain, Avalable at : http://ssrn.com/Abstract=2373113.

Chelchele, Abulfaz., Ebrahim, Abbasi, Bosra, Said. A.H (2012) Investigating the Relationship between the probability of bankruptcy and firms intentional income smoothing in Tehran Stock Exchange, *International Research Journal of applied and Basic Sciences*, 3(5), 1077-1087.

Chen, Y. Ken. , Liu, lan,. J. (2010). Earnings management CEO Domination and Growth opportunities, *International Journal of public information systems*, 1, 43-69.

Chen, K.Y., K., Lin and J., Zhou. (2005). Audit quality and earnings management for Taiwan IPO firms", *Managerial Auditing Journal*, 20(1), 86-104.

Chen, Y., Chien, C. and Huang, S. (2010). An appraisal of financially distressed firms' earnings management: evidence from listed firms in China, *Pacific Accounting Review*, 22(1), pp. 22-41.

Choi, J-H, Jean, K-A & Park, J-II (2004), the role of audit committees in decreasing earnings management: Korean evidence', *International Journal of Accounting, Auditing and Performance Evaluation*,1(1),37-60.

Chung, R., et al. (2002). "Institutional Monitoring and Opportunistic Earnings Management." *Journal of Corporate Finance* **8**(1): 29-48.

Coallier, D. 2002. Buyer beware of off-the-books funding. *Mergers and Acquisitions* 37 .(10): 29-34.

Davidson, SD., C. Stickney and R. Weil. (1987). the *Language of Business* 7th Edition, T-Horton.

De Fond, M., Park, C. (1997). Smoothing Income in Anticipation of Future Earnings", *Journal of Accounting and Economics*, 23, 115-139.

DeAngelo, H., et al. (1994). Accounting Choice in Troubled Firms. *Journal of Accounting & Economics* 17(1-2), 113-143.

DeAngelo, Harry, and Linda DeAngelo, (1990). Dividend Policy and Financial Distress An Empirical Investigation of Troubled NYSE Firms, *Journal of Finance* 45,1431-1415.

DeAngelo, L.E., (1981). Auditor size and audit quality, *Journal of Accounting and Economics*, 3 (3), 99-183.

Dechow, P. M, Sloan, R., and A. Sweeney. (1995). Detecting Earnings Management", *The Accounting Review*, 70,193-225.

Dechow, P. M, Sloan, R , Sweeney, Amy P, (1996) Causes and consequences of earnings manipulations: An analysis of firms subject to enforcement actions by the SEC, *Contemporary Accounting Research*.13(1), 1:36.

Dechow, P. M. and D. J. Skinner (2000). Earnings Management: Reconciling the Views of Accounting Academics, Practitioners, and Regulators. *SSRN e Library*.

Doyle, J., W. Ge, and S. McVay. 2007. Accrual quality and internal control over financial reporting. *The Accounting Review*, 44, 193-223.

Etemadi, H., Dehkordi ,H.F.,Amirkhani, K. (2013) Effect of auditor opinion on discretionary accruals behavior of distressed firm : Empirical Evidence from Iran, *African Journal of Business Management*, 7(20)1956-1965.

Fama, E. F. (1970). "Efficient Capital Markets: A Review of Theory and Empirical Work." *Journal of Finance* **25**(2): 383-417.

Franceschetti. Maria.B, koschtial. Cludia, (2013). Do bankrupt firms manipulate earning more than the non –bankrupt ones? *Journal of finance and accountancy*. 12, p4.

Francis, J.R., E.L., Maydew and H.C., Sparks, (1999). The role of big 6 auditors in the credible reporting of accruals. *Auditing: a Journal of Practice & Theory*,18(2),17-34.

Friedlan,J. (1994). Accounting Choices of Issuers of Initial Public Offerings, *Contemporary Accounting Research*, 11 (1),1-31.

Gandia, J. (2008). Determinates Of Internet-Based Corporate Governance Disclosure By Spanish Listed Firms. *Online information Review Journal*, 32, (6),791-817.

Gilson, S. (1989). Management turnover and financial distress, *Journal of Financial Economics*, 25(2), 241-262.

Gujarati, D. (2003). *Basic Econometrics*. Newyork: McGraw-Hill.

Habib.A., Bhuiyan, Mh.B, Islam.A., (2013). financial distress, earnings management and market pricing of accruals during the global financial crisis, *Asia-Pacific Management and Business Application*, 2(1), 39-62.

Hamdan, A. M. (2012) Factors Influencing the level of Earnings Quality: evidence from the Jordanian Industrial corporations, Journal of Islamic university for economic and administrative study, 20 (1), 265-301.

Hayn, C., (1995). The information content of losses, *Journal of Accounting and Economics*, 20(2), 125-153.

Healy, P. M and palepu, K. G. (1990) Effectiveness of accounting-based dividend covenants, *Journal of accounting and economics*. 12 (1-3), 97-124.

Healy, P.M., and Wahlen, J.M. (1999). A review of the earnings management literature and its implications for standard setting. *Accounting Horizons*. 13, 365-383.

Hsiao, F., Szu, H. L. , Ai-chi (2010). Earning management, corporate Governance, and auditor's opinions: a financial distress prediction model, *investment management and financial innovation*, 7(3), 29-40.

Hopwood, W., McKeown, J. and Mutchler, J. (1994). A reexamination of auditor versus model accuracy within the context of the going-concern opinion decision, *Contemporary Accounting Research*, 10(2), 409–31.

Investopedia http://www.investopedia.com/terms/f/financial_distress.asp

Jaggi, B & Tsui, J (2007) Insider trading earnings management and corporate governance: Empirical evidence based on Hong Kong Firms, *Journal of International Financial Management and Accounting*, 18(3),192-222..

Jaggi, B. , sun, lili, (2006) "financial distress and earning management: effectiveness of independent audit committee: pre-and post- sox evidence, *whit comb center for research in financial service (wcrfs)*.p: 06-31

Jensen, M. C., & Meckling, W. (1976). Theory Of The Firm: Managerial Behavior, Costs And Ownership Structure. *Journal of Financial Economics*, 3, 305–360.

Jones, J. (1991). "Earnings Management during Import Relief Investigations", *Journal of Accounting Research*, 29, 193–228.

Kasznik, R., (1999). On the association between voluntary disclosure and earnings Management. *Journal of Accounting Research,* 37(1), 57-81.

Kim, HJ & Yoon, SS (2008), The impact of corporate governance on earnings management in Korea, *Malaysian Accounting Review*, 7(1),43-59.

Kim, O. and verrechia, R. (1994) Market liquidity and volume around earnings information asymmetry announcement, *journal of accounting and economics*, 17, 14-67.

Klein A , (2002), Audit committee, board of director characteristics, and earnings management, *Journal of Accounting and Economics* 33, 375–400.

Krishnan, G.V., (2003). Audit quality and the pricing of discretionary accruals, *Auditing: A Journal of Practice & Theory*, 22(1), 26-109.

Kothari, S. P., A. Leone, and C. Wasley. (2005). Performance Matched Discretionary Accruals , *Journal of accounting and Economics*, 39, 161-197.

Larcker D. F, Richardson, S.A. (2004). Fees Paid to Audit Firms, Accrual Choice, And Corporate Governance, *Journal of Accounting Research*, 42(3).

Leach, Robert, (2007). Do Firms Manage their Earnings Prior to Filing for Bankruptcy? Academy of Accounting and financial studies Journal, 11(3)125-137.

Lel, Ugur., (2013). Can Institutional Investors Restrain Earnings Management Activities in Weak Investor Protection Countries? The Role of Foreign and Domestic Institutional Investors (September 24, 2013). Available at: http://dx.doi.org/10.2139/ssrn.2223651.

Li, J., lu, Z., jian, Z. (2006) Earnings management and delisting risk of IPO firms *Australian finance and banking conference.*

Liberty, S. and Zimmerman, J. (1986). Labor union contract negotiations and accounting choice, *The Accounting Review*, 61(4),692-712.

Margolis, Sheila, "What is the Optimal Group Size for Decision Making?, www.shielamargolis.com/2011/01/24.

Mashoka, T.Z. (2010) Earnings Management and Loss Reversal ,School of Social Sciences PhD

Theses.

McKeown, J. , Mutchler, J. and Hopwood, W. (1991), Towards an explanation of auditor failure to modify the audit opinion of bankrupt firms , *Auditing: A Journal of Practice and Theory*, 10 (Supplement), 1-13.

McNichols, M., (2002). Discussion of the Quality of Accruals and Earnings: the Role of Accruals Estimation Errors, *the Accounting Review*, 77, 61-69.

Mulford, Charles w. , Comiskey, Eugene, E. (2002) The financial number Game Detecting Creative Accounting Practices.www.wiley.com.

Murphy, K. J. and Zimmerman, J. L. (1993), financial performance surrounding CEO turnover, *Journal of Accounting and Economics* 16, 273-315.

Mutchler, J., Hopwood, W. and McKeown, J. (1997). The influence of contrary information and mitigating factors on audit opinion decision on bankrupt firms", *Journal of Accounting Research*, 35 (2), 295–310.

Myers, L., and D.J. Skinner. (1999). Earnings Momentum and Earnings Management Working Paper, University of Michigan.

Myers, S.C. (1977), Determinants of Corporate Borrowing , *Journal of Financial Economics*, Vol. 5, pp. 145-75.

Nullmeier, F.M.E,(2013).Earning management during Financial crisis, Erasmus School of Economics.

Ohlson, J.A. (1980) Financial Ratios and the Probabilistic Prediction of Bankruptcy, *Journal o f Accounting Research*, 1, 109-131.

Osborne, Jason & Elaine Waters (2003). Four assumptions of multiple regressions that researchers should always test. *Practical Assessment, Research & Evaluation*,8 (2)North Carolina State University and University of Oklahoma.

Peasnell, K.V., Pope, P.F., Young, S., (2000), Board monitoring and earnings management: Do outside directors influence abnormal accruals? Working paper

Raman. K, shahrur.H, (2008). Relationship specific investment and earnings management evidence on corporate suppliers and customers" *The accounting review*, 83, 1041-1081.

Ramadan, Imad Z. (2012) "Earnings Management and Investment Behaviour: The Case of Jordan" Under evaluation , *International Journal of Academic Research*

Report of Cadbury committee, "*the financial aspects of corporate governance*" 1/DEC/1992, paragraph 4.10 and 4.11, p.p 21 .

Rosner, R.L. (2003). Earnings manipulation in failing firms, *Contemporary Accounting Research*, 20, 361-408.

Schipper, K.(1989). Commentary on Earnings Management, *Accounting Horizons*, 3, 91–106.

Senbet, L. W. and Seward, J. (1995). Financial distress, bankruptcy and reorganization, in R.A. Jarrow et al. (ed.), Handbooks in Operations Research and Management Science (Elsevier Science) 9, 921-961.

Skinner, D. 1993. The investment opportunity set and accounting procedure choice. *Elsevier Science Publishers*, 407-445.

Smith, C. W. Jr., Watts, R. L., (1992). The investment opportunity set and corporate Financing, dividend and compensation policies. *Journal of Financial Economics*, 32, 263.-292

Sun,lili. Jaggi, bikki. ,Jessica mai., ying-shin, (2006). Financial distress and earnings management effectiveness of independent audit committee: pre and post-sox evidence,www.reserchgate.net.

Sun, L. , Rath, S. (2008). Fundamental Determinants, Opportunistic Behavior and Signaling Mechanism: An Integration of Earnings management Perspectives, *International Review of Business Research Papers*, 4 (4), 406-420.

Sweeney, A. P. (1994), Debt-covenant violations and managers' accounting responses, *Journal of Accounting and Economics*, 17(3), 281-308.

Teoh , S. H., Welch. I. , Wong. (1998) Earnings Management and the Post Issue Underperformance of Seasoned Equity Offering, *Journal of Financial Economics*, 54.

Veldhoven, P.(2010) Do Companies in financial distress use Earning Management? Master Thesis, Erasmus university, Rotterdam.

Watts, R. And J. Zimmerman. (1986) Positive Accounting Theory , Prentice-Hall. Englewood ClitTs.NJ.

Watts, R. L. and J. L. Zimmerman (1990). Positive Accounting Theory: A Ten Year Perspective. *Accounting Review* 65(1),131-156.

Xiaozhou. W, (2012) Earnings Management and Corporate Restructuring: Evidence from 'Label removed' ST Firms in China" International Conference on Management, Humanity and Economics ,August 11-12, 2012 Phuket (Thailand).

Zhou, J. and R., Elder, (2003). Audit firm size, industry specialization and earnings Management by initial public offering firms, working paper, Syracuse University, Syracuse,NY and SUNY-Binghamton, Binghamton, NY.

Zurigat, Z. Gharaibeh, M. (2011) Do Jordanian firms smooth their dividends? Empirical Test of Symmetric and Asymmetric Partial Adjustment Models, international research journal of finance and economics, (81) 160:171.

APPENDIX 1 COMPANY NAME
1. JORDAN PETROLIUM REFINERY CO.LTD
2. TRAVETINE COMPANY PLC
3. JORDAN TANNING CO.LTD
4. NATIONAL PEROLIUM CORPORATION
5. PEARL SANITARY PAPER CONVERTING CO
6. DAR AL DAWA DEVELOPMENT AND INVESTMENT
7. THE JORDANIAN PHARMACEUTICAL MANUFACTURING
8. PREMIER BUSINESS AND PROJECT CO.LTD
9. NATIONAL CHLORINE INDUSTRIES
10. JORDAN INDUSTRIAL RESOURCES
11. THE INDUSTRIAL COMMERCIAL & AGRICULTURAL
12. JORDAN CHEMICAL INDUSTRIES
13. INDUSTRIAL IDUSTRES & MATCH/JIMCO
14. JORDAN SULPHO-CHEMICALES
15. COMPREHENSIVE MULTIPLE PROJECT
16. THE ARAB PESTICIDES & VETERINARY DRUGS MFG. CO
17. ARAB COMPANY FOR INVESTMENT PROJECTS
18. UNION ADVANCED INDUSTRIES
19. AL-QARIA FOOD & VEGETABLE OIL INDUSTRIES CO. P.L.C

20. UNIVERSAL MODERN INDUSTRIES
21. NUTRI DAR
22. FIRST NATIONAL VEGETABLE OIL INDUSTRIES CO
23. JORDAN POULTRY PROCESSING & MARKETING
24. JORDAN DAIRY
25. GENERAL INVESTMENT
26. NATIONAL POULTRY
27. JORDAN VEGETABL OIL INDUSTRIES
28. UNION TOBACCO & CIGARETTE INDUSTRIES
29. GENERAL MINING COMPANY PLC (THE PUBLIC MINING)
30. ARAB ALUMINIUM INDUSTRY /ARAL
31. NATIONAL STEEL INDUSTRY
32. JORDAN PHOSPHATE MINES
33.THE JORDAN CEMENT FACTORIES
34.THE ARAB POTASH
35.JORDAN STEEL
36.NATIONAL ALUMINIUM INDUSTRIES
37.TRAVERTINE COMPANY LTD
38.JORDAN ROCK WOOL INDUSTRIES/JWICO
39.AL-QUDS READY MIX

40.THE JORDANIAN PIPES MANUFACTURING
41.READY MIX CONCRTE AND CONSTRUCTION SUPPLIES
42. RUM ALADDIN INDUSTRIAL
43. ARABIAN STEEL PIPES MANUFACTURING
44. AL JANUOB FILTERS MANUFACTURING
45.NATIONAL CABLE &WIRE MANUFACTURING
46. JORDAN NEW CAPLE
47 ARAB ELECTRIAL INDUSTRIES
48 THE JORDAN WORSTED MILLS
49 EL- ZAY READY WAER MANUFACTURING
50 INTERNATIONAL CERAMIC INDUSTRIES
51 JORDAN CERAMIC INDUSTRIES

APPENDIX 2

Appendix 2: Financial distress & earnings management Cross Tab results

FDIS * EMCLAS Crosstabulation

			EMCLAS		Total
			Not practicing earnings management	Practicing earnings management	
FDIS	Non Distressed	Count	42	42	84
		% within FDIS	50.0%	50.0%	100.0%
	Distressed	Count	39	90	129
		% within FDIS	30.2%	69.8%	100.0%
Total		Count	81	132	213
		% within FDIS	38.0%	62.0%	100.0%

Chi-Square Tests

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.435(b)	1	0.004		
Continuity Correction(a)	7.617	1	0.006		
Likelihood Ratio	8.393	1	0.004		
Fisher's Exact Test				0.004	0.003
Linear-by-Linear Association	8.396	1	0.004		
N of Valid Cases	213				

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 31.94.